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हनीकोम व हकअबैक तौलिये — विशिष्टि
(दूसरा पुनरीक्षण)

**Textiles — Honeycomb And
Huckaback Towels, Cotton Khadi,
Bleached or Dyed — Specification**
(Second Revision)

ICS 59.080.30

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FOREWORD

This Indian Standard (Second Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Handloom and Khadi Sectional Committee had been approved by the Textile Division Council.

This standard was first published in the year 1966 and subsequently revised in 1994. This standard has been again revised to incorporate the following major changes:

- a) Requirement for identification of material has been incorporated;
- b) Sampling plan and criteria for conformity has been modified;
- c) References to Indian Standards have been updated; and
- d) BIS certification marking clause has been updated.

The composition of the Committee responsible for the formulation of this standard is given in Annex D.

For the purpose of deciding whether a particular requirement of this standard is complied with the final value, observed or calculated, expressing the result of a test or analysis shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

TEXTILES — HONEYCOMB AND HUCKABACK TOWELS, COTTON KHADI, BLEACHED OR DYED — SPECIFICATION

(Second Revision)

1 SCOPE

1.1 This standard prescribes constructional particulars and other requirements of honeycomb and huckaback towels, cotton khadi, bleached or dyed.

1.2 This standard does not specify the general appearance, feel, shade, etc, of the towels.

2 REFERENCES

The standards listed in Annex A contain provisions which through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated in Annex A.

3 ATMOSPHERIC CONDITIONS FOR TESTING

Test specimens may be conditioned and tested in the prevailing atmospheric conditions for checking the conformity of the towels to the standard. However, in case of dispute, the specimens shall be conditioned and tested in the standard atmosphere as specified in the referred Indian Standards on test methods.

4 GENERAL REQUIREMENTS

4.1 Yarn

The yarn used in the manufacture of towels shall be hand spun from clean carded cotton. It shall be reasonably even and free from leaf particles, slubs, neps and other spinning defects. The approximate count of warp and weft yarn is given in Table 1.

Table 1 Constructional Particulars and Breaking Load Requirements of Honeycomb and, Huckaback Towels, Cotton Khadi, Bleached or Dyed

(Clauses 4.1 and 5.1)

Variety No.	Count of Yarn (for Guidance only) Universal Count (Cotton Count)		Ends/dm	Picks/dm	Mass g/m ²	Breaking Load (on 10.0 × 20 cm Strips), N		Weave
	Warp	Weft				Warp	Weft	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	74 tex (8s Ne)	74 tex (8s Ne)	110 (double)	94 (double)	360	450	430	Honeycomb
2	74 tex (8s Ne)	98 tex (6s Ne)	110 (double)	72 (double)	325	620	530	Huckaback
3	60 tex (10s Ne)	60 tex (10s Ne)	80 (double)	80 (double)	198	450	450	Huckaback
4	42 tex (14s Ne)	49 tex (12s Ne)	178 (double)	134 (double)	290	1200	660	Huckaback
5	30 tex (20s Ne)	30 tex (20s Ne)	110 (double)	94 (double)	218	630	530	Huckaback
Tolerance, percent	—	± 5	± 10	± 5	- 10	- 10	—	—
(← ----- see Note ----- →)								
Method of Test	IS 3442	IS 3442	IS 1963	IS 1963	IS 1964	IS 1969 (Part 1)		Visual

NOTE — Any increase in values of mass (g/m²) or breaking load beyond positive tolerance shall not be a cause of rejection of the fabric.

4.2 Towels

4.2.1 The selvages of the towels shall be firm and well woven.

4.2.2 The towels shall be free from blueing, dressing and filling materials and substances liable to cause subsequent tendering.

4.2.3 The edges of the towels shall have either knotted fringes or hemmed. The length of the towels shall be exclusive of fringes. For hemming, each transverse end of the towel shall be hemmed to a depth of not less than 13 mm with raw edges having a turn-in of 6 mm. The stitching shall be firm and regular. The hemming shall be uniform and flat and the edges shall be properly secured.

4.2.4 The towels, when visually examined, shall be reasonably free from spinning, weaving and processing defects.

5 REQUIREMENTS

5.1 Constructional particulars and breaking load of the towels shall conform to the requirements specified in Table 1.

5.2 The towels shall also conform to the other requirements specified in Table 2.

5.3 Dimensions

Length and width of the towels when determined in accordance with the method given in Annex B shall

be as agreed to between the buyer and the seller or as declared by the seller. However, a tolerance of ± 2 cm and ± 1 cm shall be permitted on length and width respectively.

5.4 Freedom from Defects

The towels when visually inspected shall be free from the major flaws given in Annex C. However, permissible number of flaws per piece may be as agreed to between the buyer and the seller.

5.5 Sealed Sample

5.5.1 In order to illustrate or specify the indeterminable characteristics, such as general appearance, lustre, feel and shade, if a sample has been agreed upon and sealed, the supply shall also be in conformity with the sample in such respects.

5.5.2 The custody of the sealed sample shall be a matter of prior agreement between the buyer and the seller.

6 PACKING

Fold each piece of towel into a suitable size and arrange a number of towels to make a bundle. Wrap each bundle of towels in materials, such as strong paper, polyethylene film, etc, which will not cause any stain on the towels. Unless otherwise agreed, pack the bundles in conformity with the procedure laid down in IS 293 or IS 1347.

Table 2 Other Requirements for Honeycomb and Huckaback Towels, Cotton Khadi, Bleached or Dyed

(Clause 5.2)

Sl. No.	Characteristics	Requirements	Method of Test
(1)	(2)	(3)	(4)
i)	Identification of material (<i>see</i> Note)	100 percent cotton	IS 667
ii)	Dimensional change, percent, <i>Max</i>	5	IS 2977
iii)	Scouring loss, percent, <i>Max</i>	2.5	IS 1383
iv)	pH value of the aqueous extract (Cold method)	6.0 to 8.5	IS 1390
v)	Colour fastness (for dyed cloth only)		
	a) Light (Change in colour)	5 or better	IS 2454
	b) Washing : Test D(4)	IS/ISO 105-C10	
	1) Change in colour		4 or better
	2) Staining of adjacent fabric	4 or better	
	c) Rubbing (Dry and wet)	4 or better	IS 766

NOTE — Impurities of less than 0.2 percent shall be permitted.

7 MARKING

7.1 The towels shall be suitably marked with the following information:

- Name of the material for example, towel, cotton khadi, bleached;
- Length (cm) and width (cm);
- Indication of the source of manufacture; and
- Other declarations required as per law in force.

7.2 BIS Certification Marking

The towels conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act, 2016* and the Rules and Regulations framed thereunder, and the towels may be marked with the Standard Mark.

Table 3 Sample Size and Permissible Number of Non-conforming Towels
(Clauses 8.3 and 8.4)

Lot Size	Sample Size	Permissible Number of Non-conforming Pieces	Sub-sample Size
(1)	(2)	(3)	(4)
Up to 90	5	0	3
91 to 150	8	0	3
151 to 500	13	1	5
501 to 1 200	20	1	5
1 201 to 10 000	32	2	8
10 001 to 35 000	50	3	8
35 001 to 5 00 000	80	5	13
5 00 001 and above	125	7	13

8 SAMPLING

8.1 Lot

The quantity of the towels delivered to buyer against one despatch note shall constitute a lot.

8.2 The conformity of the lot to the various requirements specified in the standard shall be determined on the basis of tests carried out on the samples selected from the lot.

8.3 Unless otherwise agreed, the number of pieces selected at random for inspection shall be in accordance with Table 3. These pieces shall be selected from at least 10 percent of the bales drawing equal numbers of pieces, as far as possible, from each bale.

8.3.1 For selection of samples at random from the lot, procedure given in IS 4905 may be followed.

8.4 Number of Samples and Criteria for Conformity

It shall be as follows:

Characteristics	Number of Samples	Criteria for Conformity
Ends, picks, length, width and freedom from defects	According to col 2 of Table 3	Number of non-conforming towels shall not exceed the corresponding number given in col 3 of Table 3
Mass, breaking load, scouring loss, pH value, dimensional changes, colour fastness and identification of material	According to col 4 of Table 3	All the towels under test shall meet the requirement

ANNEX A

(Clause 2)

LIST OF REFERRED INDIAN STANDARDS

<i>IS No.</i>	<i>Title</i>	<i>IS No.</i>	<i>Title</i>
105-C10 : 2006	Textiles — Tests for colour fastness: Part C10 Colour fastness to washing with soap or soap and soda	1964 : 2001	Textiles — Methods for determination of mass per unit length and mass per area of fabrics (<i>second revision</i>)
293 : 1980	Code for seaworthy packaging of cotton yarn and cloth (<i>third revision</i>)	1969 (Part 1) : 2018	Textiles —Tensile properties of fabrics: Part 1 Determination of maximum force and elongation at maximum force using the strip method (<i>fourth revision</i>)
667 : 1981	Methods for identification of textile fibres with supplement (<i>first revision</i>)	2454 : 1985	Methods for determination of colour fastness of textile materials to artificial light (xenon lamp) (<i>first revision</i>)
766 : 1988	Method for determination of colour fastness of textile materials to rubbing (<i>first revision</i>)	2977 : 1989	Fabrics (other than wool) — Method for determination of dimensional changes on soaking in water (<i>first revision</i>)
1347 : 1972	Specification for inland packaging of cotton and yarn (<i>first revision</i>)	3442 : 1980	Method for determination of crimp and count of yarn removed from fabrics (<i>first revision</i>)
1383 : 1977	Methods for determination of scouring loss in grey and finished cotton textile materials (<i>first revision</i>)	4905 : 2015	Random sampling and randomization procedures (<i>first revision</i>)
1390 : 1983	Methods for determination of pH value of aqueous extracts of textile materials (<i>first revision</i>)		
1963 : 1981	Methods for determination of threads per unit length in woven fabrics (<i>second revision</i>)		

ANNEX B(*Clause 5.3*)**METHOD FOR DETERMINATION OF DIMENSIONS OF THE TOWELS****B-1 DIMENSIONS**

Lay flat a towel on a horizontal surface and render it free from all creases and wrinkles. Measure the length and width of the towel correct to the nearest 0.5 cm

with a steel measuring scale, placed at right angles to the edges at two different places in each direction. Calculate average values of length and width from the two readings in each direction.

ANNEX C(*Clause 5.4.1*)**LIST OF MAJOR FLAWS**

- | | |
|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| a) More than two threads missing either in warp or weft way of the piece, extending over 25 cm. | g) Oily weft in the piece. |
| b) Smash definitely rupturing the texture of the piece. | h) Defective hemming extending over 50 mm in length. |
| c) Hole, cut or tear in the body of the piece. | j) Gout due to foreign matter, usually lint or waste woven into the fabric. |
| d) Prominent pulled-in selvedge defect. | k) Prominently noticeable weaving and dyeing defects. |
| e) Prominently noticeable warp or weft float in the body of the piece. | m) Any other defect which would affect the durability and/or serviceability of the piece. |
| f) Noticeable oil or other stain in the piece. | |

ANNEX D*(Foreword)***COMMITTEE COMPOSITION**

Handloom and Khadi Sectional Committee, TXD 08

<i>Organization</i>	<i>Representative(s)</i>
Weavers Service Centre, Delhi	SHRI VISHESH NAUTIYAL (Chairman) SHRI VIKAS KUMAR (<i>Alternate</i>)
All India Handloom Fabrics Marketing Cooperative Society Ltd, Delhi	SHRI R. UTHAMAN SHRI SHRIKANT (<i>Alternate</i>)
Association of Corporations of Apex Societies of Handlooms, Delhi	SHRI ABDUL REHMAN SHRI PALLAB TALUKDAR (<i>Alternate</i>)
Baster Adimjati Sewak Sangh, Baster	SHRI SUMIT DAS SHRI AMIT DAS (<i>Alternate</i>)
Commissioner Handloom & Textiles, Himachal Pradesh	REPRESENTATIVE OF COMMISSIONER & DIRECTOR OF INDUSTRIES
Commissionerate of Handlooms & Textiles, Chennai	THIRU. C. MUNIANATHAN SHRI K. KARNAN (<i>Alternate</i>)
Director Handloom & Textiles, Madhya Pradesh	DIRECTOR SHRI MAHESH GULATI (<i>Alternate</i>)
Haryana Khadi Gramodyog Sangh , Karnal	SHRI PAWAN GARG SHRI R. S. YADAV (<i>Alternate</i>)
Indian Institute of Handloom Technology, Jodhpur	SHRI JITENDER TAK
Indian Institute of Handloom Technology, Varanasi	SHRI S. K. ROHILLA
J & K Handloom Development Corporation Ltd, Jammu Tawi	MANAGING DIRECTOR SHRI VINOD KAUL (<i>Alternate</i>)
Jan Sewa Ashram , Aligarh	SHRI R. K. SHARMA SHRI AKHILESH KUMAR AWASTHI (<i>Alternate</i>)
Khadi Gramodyog Mandal, Rampur	SHRI RAKESH CHAUDHARY SHRI PRINCE CHAUDHARY (<i>Alternate</i>)
Khadi & Village Industries Commission, New Delhi	SHRI V. K. NAGAR SHRI RAM NARAYAN (<i>Alternate I</i>) SHRI A. K. AHLUWALIA (<i>Alternate II</i>)
Khadi Dyers & Printers, Mumbai	SHRI D. N. BHATT SHRI V. D. JOSHI (<i>Alternate</i>)
Ministry of Defence (DGQA), New Delhi	SHRI M. H. BASAVRAJ SHRI N. SENTHIL KUMAR (<i>Alternate</i>)
National Handloom Development Corporation Ltd, Greater Noida	DR SAKTHIVEL PERUMAL SAMY SHRI JITENDRA TOLAMBIYA (<i>Alternate</i>)
Office of Development Commissioner (Handlooms), New Delhi	DR S. ADINARAYANA SHRI VINAY KUMAR (<i>Alternate</i>)
Rastriya Khadi Gramodyog Federation, Moradabad	SHRI ANIL KUMAR SINGH SHRI KULDEEP SINGH (<i>Alternate</i>)
Sushil Gramodyog Sanstha, Ghaziabad	SHRI SUNIL TYAGI
Swastik Gramodyog Samiti, Delhi	SHRI M. L. PATHAK SHRI ABHISHEK DIXIT (<i>Alternate</i>)
Textiles Committee, New Delhi	SHRI PARVEJ AHMED SHRIMATI SHILPI CHAUHAN (<i>Alternate</i>)

<i>Organization</i>	<i>Representative(s)</i>
The Handicrafts & Handloom Exports Corporation of India Ltd, NOIDA	SHRI NIRMAL SINHA SHRI A. V. SINGH (<i>Alternate</i>)
The Handloom Export Promotion Council, Chennai	DR M. SUNDAR
The Tamil Nadu Handloom Weavers' Cooperative Society Ltd, Chennai	SHRI T. N. VENKATESH SHRI K. KATHIRESAN (<i>Alternate</i>)
In personal capacity [148, II Floor, Sector 8, Faridabad, Haryana 121 006]	SHRI B. B. PAUL
BIS Directorate General	SHRI A. K. BERA, SCIENTIST 'F' AND HEAD (TXD) [REPRESENTING DIRECTOR GENERAL (<i>Ex-officio</i>)]

Member Secretary

SHRI J. K. GUPTA
SCIENTIST 'D' (TXD), BIS

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